

A WEST INDIA FACTORY.

How Cane is Managed at Usine St. Madeline.

The following short description of a large central factory, in the British West Indies, is contributed by a Brisbane gentleman who visited those islands during 1879-80, and relates to the "Usine St. Madeline," situated near San Fernando, in the island of Trinidad, the property of the Colonial Company (Limited), of Leadenhall-street, London. The factory consists of a large set of brick and iron buildings erected in a thoroughly substantial manner, standing in a slight hollow. On one side, a short distance from and overlooking the factory on rising ground, is the Manager's house with stables, overseer's quarters, etc., in close proximity; while a short distance off are the coolie barracks, hospital, etc. About 4,000 acres are under cultivation in the district surrounding the Usine, from which the requisite supply of cane is obtained. Some of the land belongs to the Colonial Company, and the remainder is owned by planters, who grow cane and sell it. A railway, four feet, eight and a-half inch gauge, intersects the surrounding country. The farmers cut their own cane and deliver it upon railway trucks. Locomotives convey the trucks to the mill buildings, each truck going over a weighbridge at the entrance to the buildings, the farmer being paid for the net weight of canes delivered at per ton. A company own a wharf a few miles from the Usine, to which the railway is laid. Vessels can lie alongside and discharge coals, &c., direct to the trucks, while the sugar and rum made at the Usine is trucked direct from the factory to the ship's side. The loaded trucks are run up to the entrance of the building, and coolies unload the canes on them directly to the cane-carriers. There are two large crushing mills, each having rollers 34 inches in diameter by 72 inches long, each mill being driven by a 60 h. p. beam engine having a cylinder 26 inches in diameter and 60 inches stroke, and fitted with wrought iron beams. The fly wheels of these engines are each 24 feet in diameter, and the intermediate gearing is very strong and massive. The juice, after expression in the mills, is pumped up into the clarifiers, of which there are twenty, each holding 480 gallons. They are circular copper clarifiers, fitted with cast-iron steam jackets. The clarifiers discharge into cast-iron subsiders underneath forty in number. The juice is then filtered in charcoal filters; and, after flowing into a large tank, is pumped up by a horizontal pumping engine through a juice-heater, to a large set of triple effect pans. After partial evaporation in the triple effect the sugar is finished in the vacuum pans, from which it is discharged into trucks running on rails, and is put through mixers from whence it passes into centrifugals, of which machines there is a long row of the suspended type. The centrifugals discharge the sugar downwards into trucks which run on rails underneath and convey the sugar to the stores ready to be bagged. The megass is not dried, but it is taken direct from the mills on an elevated platform, from whence it is fed, mixed with coal into furnaces designed expressly for the purpose. There are fourteen large boilers of the locomotive type for supplying steam to the various engines, pans, etc., throughout the factory. Several locomotives and a large number of trucks compose the rolling-stock. During the season of 1879, four thousand two hundred tons of sugar were sent away from this factory. At that time only one mill was crushing, the second mill was being erected in readiness for the ensuing season, and it was estimated that during the crop of 1880 at least 6,000 tons of sugar would be the output. A large still on the continuous system is at work here, and in 1879 it turned out 1,290 puncheons of rum. The labor employed is almost entirely that of coolies, and is found to be very satisfactory. The Colonial Company, (limited), own a number of fine properties, have a large amount of capital embarked in the sugar industry in the West Indies.

A Press Association message says: Major Wortley has received orders to march to Assuan to co-operate with Major Ketchel in command at Korosko. Both officers command Bedouin forces. Col. Trotter has garrisoned Wady Halfa with Egyptian troops, expelling the Bazonks formerly there.

EXTRACT FROM THE REPORT OF THE PRESIDENT OF THE BOARD OF HEALTH.

[CONCLUDED.]

In this state, it may be said that the Government undertakes the whole charge of the hospital treatment of the sick poor of the Nation. In all other enlightened States, the great work of providing for the indigent sick is mainly undertaken by the charitable enterprise of wealthy members of the community, who combine to found monuments, illustrative of the charitable and liberal spirit of the Nation.

It may be said that Hawaii has to meet a calamity of wide-spread disease that would baffle the resources of private benevolence; at least 2 per cent. of her entire population being attacked by a fearful supposed incurable malady of an exceptional character that demands separation and isolation. She is laboring under a state of suffering that calls for all the energies and resources of the State, and I am warranted in saying that Hawaii has faced her great calamity bravely, and has made a provision for her suffering people that will compare most favorably with the efforts made by any other enlightened State to meet a similar exigency.

The appropriation of \$90,000 for segregation and care of lepers, though deemed ample at the time it was voted by the Legislature of 1882, yet has fallen short of the demand upon the Health Authorities. The appropriation was based upon an estimated average of 700 patients in charge; whereas, there have been treated at the settlement for segregation on Molokai and at the Branch Hospital, an average of about 1,000 patients for some time past.

The Report of the Marshal of the Kingdom shows that during this biennial period, 777 lepers and suspected lepers have, in accordance with orders from the Board of Health, been arrested and taken from their homes.

Of this number, 531 have been condemned, after medical examination, as lepers, and were sent to the Branch Hospital; while, of these again, 265 were sent to Molokai, and 66 were discharged from the hospital on probation; 28 subsequently returning to it.

In accordance with medical opinion and report, nearly all these cases with very few exceptions, or over 90 per cent. of the leprosy patients segregated during this period, were cases of several years standing, and evidently should have been segregated during previous periods.

But it is difficult to indulge in any reflection on the action of my predecessors, because the law requiring segregation has not been carried out with rigor.

For what does this law strictly require?

That men, women and children shall be torn from their homes, without any provision being made for the suffering and loss that may be entailed. These are some of the experiences and consequences of the law, that have come under my own observation.

A man upon Hawaii has been suddenly taken away from his house by summary arrest, leaving behind a helpless wife about to give birth to a baby.

With great pain and risk, the devoted wife determined to follow her husband, had undertaken the journey to the Capital, and the health authorities, unable to resist her appeal as a homeless and friendless woman, after the confinement of her

companion, have allowed her to enter the hospital to join her leprous husband, there to give birth to her child.

Again, a woman in the prime of life and activity, yet condemned as an incipient leper, is suddenly moved from her home, to which the husband returns to find his two helpless little children moaning for their lost mother.

Such cases are not only real, but of frequent occurrence.

The law requiring segregation involves immense responsibilities and consequent charges upon the State.

It is not enough to care for a thousand people summarily removed from their homes, but the thousand suffering families affected by their removal demand some consideration also.

In the case of diseases eminently contagious, such as Small-pox, Cholera, Yellow-Fever, &c., which run their violent course in a few days all enlightened communities and such as are animated by the most humane spirit, have pursued, and could pursue with proper regard to the safety of the community, only one course, and that is prompt and thorough segregation without regard to the individual or family suffering that may follow.

But with regard to leprosy—a disease well defined and recognized and under special treatment in Norway, India and other countries as in this Kingdom; a disease that will permit its victim to live with ordinary enjoyment of all bodily faculties for a period lasting from five to fifteen years; that permits noble and self-devoted persons like Father Damien to serve at the Leper Settlement, even to assist at the burial of the putrid dead for the past eleven years without scathe; and that permits the blessed Sisters of Charity at Tracadie, as with us at Kakaako to serve the afflicted with this disease, in every way even to the ablution and bandaging of most abominable sores, and to do all this without taint or injury to their pure bodies. What shall be said of such a disease? Shall it be characterized as eminently contagious?

Such a characterization is entirely uncalled for, is not warranted by experienced medical opinion, and the violent and hasty segregation which it would inspire is a wrong to a suffering community.

But the separation of the leper from the healthy, has been practiced in all countries and has, in a multitude of instances, prompted the sufferers from this dread disease to retire into solitude, away from the presence of their fellow-men.

The confirmed leper should be separated from the community. But there should be no alarm in consequence of the temporary presence in the street of a leper; or account of any ordinary intercourse with a sufferer from this disease.

According to invariable experience in the observance of this disease in this country and elsewhere, such a sufferer may pass the healthy in the street or frequent the same room with them in the ordinary intercourse of life, or shake hands with others, or even render services to the sound, with no more danger of imparting the malady than may be apprehended from the presence of intercourse with consumptives under the same circumstances.

However, segregation of lepers, having been determined by the law and being proper and even necessary in all confirmed cases, the Board of Health has endeavored to do its duty to the community and to meet the law of the land by carrying out segregation of lepers to an extent not accomplished by

any previous health administration, and it is the purpose of this Board of fulfil its duty to the full extent that may be warranted.

In the estimates the sum of \$100,000 has been placed for the expenses of the Leper Settlement, which is only \$10,000 in advance of the estimate for the previous period, and as the average increase of patients at the Settlement and in the Branch Hospital is fully 25 per cent. more than during the previous period, the estimate may be considered deficient. But the expectation of the Board is, that by increased facilities of transportation and by the increase of the sources of subsistence at the Settlement, the cost of its support may be materially reduced without any diminution of the provision made for the patients, and furthermore there is every reason for entertaining the hope that the disease is on the decline.

The condition of the Leper Settlement on Molokai, and the treatment of its suffering settlers have been variously viewed by different observers, some regarding its condition as a most praise-worthy endeavour to provide for a great public calamity, and others reflecting upon its management as a discredit to our health administration. It is proper here to say a few words in review of the history of the Settlement. In January, A. D. 1865, in view of the alarming increase of the disease, segregation of lepers was determined upon by the Government and provided for by law. After a careful search of the group, the district of Kalawao on Molokai, a territory of about 5000 acres was selected.

It is a broad and fertile domain bordering on the sea, and its situation is admirably adapted for the purpose. It is completely enclosed on the land side by a towering rampart of precipitous bluffs, over 2000 feet in height. The broad plain or plateau thus enclosed, and rendered comparatively inaccessible by bluff and sea, presents a variegated surface and is ever covered with a luxuriant verdure. It had been, in time past, the habitation of a numerous population of many thousands of Hawaiians, according to the indications of ancient cultivation, who had evidently found their subsistence within its borders; therefore it might again, become the self-supporting home of a thousand or more people.

To this Settlement the sick were at first transported, without other provision being made for them than bare subsistence and such housing as a few grass huts might afford.

The resources of the State at that time hardly warranted any greater charge than provision for the subsistence of several hundred people suddenly taken from their homes and isolated from the community. Up to A. D. 1878, the sick residents of the Settlement were simply herded and fed at Kalawao, not provided with such necessities as lamp-light, soap and lint, without any means of transportation of their staple article of food which had to be carried by individuals on foot for miles, and were during all the time, previous to that period, entirely without any medical attendance whatever.

But the Legislative Body of 1878, gave to the condition of the lepers a special attention. Large sums for their treatment and care were appropriated, and the health authorities consequently provided improved dwellings, additional and more varied food, with lamp-light and other necessities to improve the condition of a sick and isolated community; so that the contrast

of the earlier condition of the Settlement with the present is very good.

The segregated people are now lodged in convenient tight board houses, the supply of food is ample, and the conditions of living at the Settlement in neat cottages surrounded by pleasant grounds and fruitful gardens, would be attractive, were it not for the presence of the dread disease.

But this calamity has been greatly mitigated, and a comparison of the rates of mortality at the Settlement for a period of two years, as shown in the appendix, will prove that the conditions of living of the lepers at the Settlement have been improved and their lives consequently prolonged.

The looker-on at the present time and anyone who confines his vision to what is before him without considerations of antecedent and other conditions, may find occasion to criticize and complain. Such complaint is to be found in the statement of Dr. Stallard, a visitor to these Islands whose report is annexed. The report of R. W. Meyer, Esq., the Superintendent of the Settlement, fully answers all the statements of Dr. Stallard. The complaint of Dr. Stallard is based upon his opinion of the need of a general medical inspection, which he proposed to supply. Such general medical inspection I deem advisable, not only for the Leper Settlement but throughout the Kingdom.

The Board has, during this period, increased the staff of resident physicians from seven to nineteen, as shown by an appended list. Every district is now provided with a physician subsidized by the Government, in order to supply a gratuitous medical attendance for the sick poor; and this medical duty, in accordance with the requirements of the Board, is faithfully performed by some of the resident physicians, but is said to be neglected by some, and a conscientious medical inspection would prevent frauds upon the public purse and wrong to the suffering poor.

The Board has had in view "such medical inspection ever since" the large increase in the number of the medical employees of the Government, and aims to have it established.

The report of the visiting physician, Dr. Fitch, of the Leper Settlement, also annexed, coincides in many particulars with the critical view taken by Dr. Stallard, and I regret the tone and tenor of his report, but the Board has deemed it proper to present to you the different medical opinions that have been laid before it upon our health administration.

A Cheap Vacuum Pan.

One of the cheapest and most complete vacuum pans ever made was shown to us by the colonial representative of Messrs. Manlove, Alliott, Fryer & Co. The plans showed it to be the very thing for small planters; and it only costs £450 f.o.b. in London. The internal diameter of the pan is 4ft. 6in. by 8ft. 6in. in height. It is provided with a save-all and a condenser 18in. in diameter, a double set of copper coils, two large sight glasses, wash cups, vacuum gauge, a "dear little buttercup," cocks for juice and molasses, a barometer, proof stick etc. The vacuum engine is horizontal, the steam cylinder having a diameter of 9in. and a stroke of 16in. the pump 10in. in diameter, driven from a prolongation of the piston through the back cylinder cover. The pump is lined with brass. The exhaust steam from the vacuum engine passes into a cast-iron steam recipient, 12in. in diameter by 4ft. high. From the recipient two pipes proceed to the coils, a safety valve being provided on the recipient to prevent the steam's pressure rising too high. This pan offers a fair chance for small planters to make a good white marketable sugar. It can manufacture one ton of sugar per strike, or say two tons per day, easily. —Australian Sugar Planter.